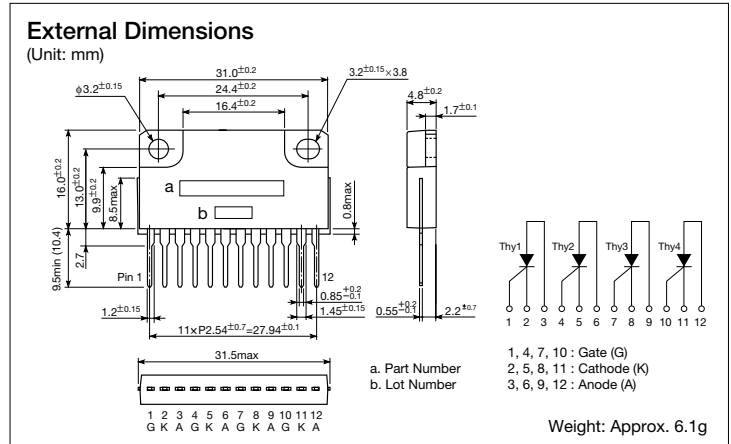


# 5A 600V 4 circuits Thyristor array

## SLA0201

### Features

- 5A 4 Thyristors combined one package
- Repetitive peak off-state voltage:  $V_{DRM}=600V$
- Average on-state current:  $I_{T(AV)}=5A$
- Gate trigger current:  $I_{GT}=10mA$  max



### Absolute Maximum Ratings

| Parameter                             | Symbol       | Ratings         | Unit       | Conditions  |
|---------------------------------------|--------------|-----------------|------------|---|
| Repetitive peak off-state voltage     | $V_{DRM}$    | 600             | V          | $T_j = -40$ to $+125^\circ C$ , $R_{GK} = 1k\Omega$                         |
| Repetitive peak reverse voltage       | $V_{RRM}$    | 600             | V          |   |
| Non-repetitive peak off-state voltage | $V_{DSM}$    | 650             | V          |   |
| Non-repetitive peak reverse voltage   | $V_{RSM}$    | 650             | V          |   |
| Average on-state current              | $I_{T(AV)}$  | 5.0             | A          | 50Hz Half-cycle sinewave, Conduction angle $180^\circ$ , Continuous current |
| RMS on-state current                  | $I_{T(RMS)}$ | 7.8             | A          |   |
| Surge on-state current                | $I_{TSM}$    | 80              | A          | 50Hz Half-cycle sinewave, Single shot, Non-repetitive, $T_j = 125^\circ C$  |
| Peak forward gate current             | $I_{FGM}$    | 2.0             | A          | $f \geq 50Hz$ , duty $\leq 10\%$  |
| Peak forward gate voltage             | $V_{FGM}$    | 10              | V          |   |
| Peak reverse gate voltage             | $V_{RGM}$    | 5.0             | V          | $f \geq 50Hz$   |
| Peak gate power loss                  | $P_{GM}$     | 5.0             | W          | $f \geq 50Hz$ , duty $\leq 10\%$  |
| Average gate power loss               | $P_{G(AV)}$  | 0.5             | W          |   |
| Junction temperature                  | $T_j$        | $-40$ to $+125$ | $^\circ C$ |   |
| Storage temperature                   | $T_{stg}$    | $-40$ to $+125$ | $^\circ C$ |   |

### Electrical Characteristics

| Parameter                                  | Symbol    | Ratings |     |     | Unit       | Conditions   |
|--|-----------|---------|-----|-----|------------|--|
|  |           | min     | typ | max |            |  |
| Off-state current                          | $I_{DRM}$ |         |     | 2.0 | mA         | $T_j = 125^\circ C$ , $V_D = 600V$ , $R_{GK} = 1k\Omega$                                       |
|  |           |         |     | 100 | $\mu A$    | $T_j = 25^\circ C$ , $V_D = 600V$ , $R_{GK} = 1k\Omega$  |
| Reverse current                            | $I_{RRM}$ |         |     | 2.0 | mA         | $T_j = 125^\circ C$ , $V_D = 600V$ , $R_{GK} = 1k\Omega$                                       |
|  |           |         |     | 100 | $\mu A$    | $T_j = 25^\circ C$ , $V_D = 600V$ , $R_{GK} = 1k\Omega$  |
| On-state voltage                           | $V_{TM}$  |         |     | 1.4 | V          | $T_C = 25^\circ C$ , $I_{TM} = 10A$  |
| Gate trigger voltage                       | $V_{GT}$  |         | 0.7 | 1.5 | V          | $V_D = 6V$ , $R_L = 10\Omega$ , $T_C = 25^\circ C$   |
| Gate trigger current                       | $I_{GT}$  |         | 5.0 | 10  | mA         |  |
| Gate non-trigger voltage                   | $V_{GD}$  | 0.1     |     |     | V          | $V_D = 1/2 \times V_{DRM}$ , $T_j = 125^\circ C$ , $R_{GK} = 1k\Omega$                         |
| Holding current                            | $I_H$     |         | 4.0 |     | mA         | $R_{GK} = 1k\Omega$ , $T_j = 25^\circ C$   |
| Critical rate-of-rise of off-state voltage | $dv/dt$   |         | 50  |     | V/ $\mu S$ | $V_D = 1/2 \times V_{DRM}$ , $T_j = 125^\circ C$ , $R_{GK} = 1k\Omega$ , $C_{GK} = 0.033\mu F$ |
| Total power dissipation                    | $P_T$     |         |     | 4   | W          | Without Heatsink, $T_j = 25^\circ C$ , All elements operation                                  |
|  |           |         |     | 32  |            | With infinite Heatsink, $T_j = 25^\circ C$ , All elements operation                            |